

PATENT ABSTRACTS OF JAPAN

(11) Publication number : 06-233289

(43) Date of publication of application : 19.08.1994

(51) Int.Cl.

H04N 7/14
H04M 3/56
H04M 11/06

(21) Application number : 05-015038

(71) Applicant : NIPPON TELEGR & TELEPH CORP <NTT>

(22) Date of filing : 02.02.1993

(72) Inventor : IRISHIMA TSUTOMU
MATSUI HIROYUKI
TOMITA YASUHIRO
IBARAKI HISASHI
ANDO MASARU

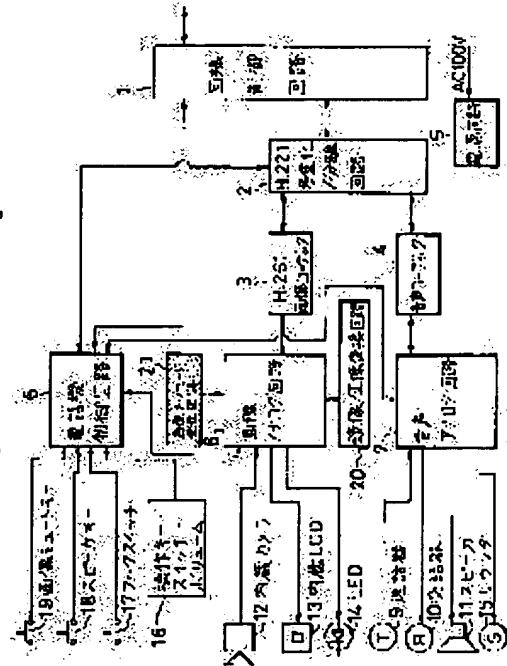
(54) IMAGE COMMUNICATION TERMINAL

(57) Abstract:

PURPOSE: To remarkably improve a service property, operability, etc., at the time of refusing image response when communication is started, at the time of executing image transmission muting during image communication, etc., after incoming call response in an image communication terminal such as a video telephone system, a video conference terminal, etc.

CONSTITUTION: A telephone set control circuit 6 starts an image analog circuit 8 in a terminating call state so as to display a self image which is converted into a mirror image by a mirror image/erecting image converting circuit 20 in an incorporated LCD 13 and to display the self image in a same way when an image response refusing function is started during a terminating call.

Thus, the operability and the service property of the image response refusing function is improved. When image transmission muting is requested by an image muting key 19, the telephone set control circuit 6 starts the image analog circuit 8 and an image message



generating circuit 21 and transmits an image message to an opposite party. Thus, the opposite party is made to recognize that reception is the one in the image transmission muting state so that the service property during image transmission muting is improved.

LEGAL STATUS

[Date of request for examination] 03.08.1995

[Date of sending the examiner's decision of rejection] 06.10.1998

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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CLAIMS

[Claim(s)]

[Claim 1] The pictorial communication terminal characterized by having a self-portrait display means to display the input image from self-equipment, and the control means which starts said self-portrait display means in the call-in condition of pictorial communication, and performs a self-portrait display in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[Claim 2] The pictorial communication terminal characterized by to have a self-portrait display means display the input image from self-equipment, an image transmitting mute actuation means, and the control means that starts said self-portrait display means when image transmitting mute is required with said image transmitting mute actuation means during the call in of pictorial communication, and performs a self-portrait display in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[Claim 3] The pictorial communication terminal characterized by having a means to stop a self-portrait display means in a pictorial communication terminal according to claim 1 or 2 when a control means carries out an arrival-of-the-mail response.

[Claim 4] The pictorial communication terminal characterized by having a means to make the image [which generates the image message which tells a partner terminal about being in an image transmitting mute condition in a pictorial communication terminal according to claim 2 or 3 / which carries out image message generating ****] message which a control means generates with said image message generating means in an image transmitting mute condition transmit to a partner terminal.

[Claim 5] The pictorial communication terminal characterized by having a means in the procedure of the CCITT advice H.242 to send out capacity and a command so that it may consider as 1B communication link or video-off as the communicate mode when image transmitting mute is performed to either from claim 1 to claim 4 by the control means in the pictorial communication terminal of a publication.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the suitable pictorial communication terminal for TV telephone which can perform voice communication and pictorial communication to coincidence, and TV meeting equipment.

[0002]

[Description of the Prior Art] In the private pictorial communication which used TV telephone etc., the image response refusal function which can carry out communication link initiation in the state of image transmitting mute, without sending a self-portrait at the time of after [an arrival-of-the-mail response] communication link initiation is considered to be effective service.

[0003] By the way, it was impossible to have checked beforehand the self-portrait transmitted by conventional TV telephone before answering the arrival of pictorial communication. Moreover, it was performing considering as an image transmitting mute condition conventionally in turning off an image input. Moreover, even when having set the circuit channel used during a communication link as communicate mode 2B of CCITT advice and image transmitting mute actuation was carried out, the connection condition of 2B might be maintained.

[0004]

[Problem(s) to be Solved by the Invention] Thus, by conventional TV telephone, since it was impossible to check beforehand the self-portrait transmitted before answering the arrival of pictorial communication, there was a trouble that serviceability was bad.

[0005] Moreover, since it was performing considering as an image transmitting mute condition conventionally in turning off an image input, the black screen was only sent to the partner terminal, in (*black screen*) the other party, it became things from the part whether it is out of order in whether it has received in the state of image transmitting mute, and there was a trouble that serviceability was missing.

[0006] Moreover, when useless accounting would be performed and it was actually used where 2B eye is connected too much in order to maintain the connection condition of 2B and to transmit unnecessary image data, even when having set the circuit channel used during a communication link as the communicate mode of 2B and image transmitting mute actuation is carried out, the problem was in serviceability and economical efficiency.

[0007] It is made in order that this invention may solve the above-mentioned trouble, and the purpose is for providing about a pictorial communication terminal suitable as TV telephone which has improved remarkably the serviceability at the time of actuation, economical efficiency, and operability, and a TV meeting terminal at the time of the arrival in the case of performing image response refusal at the time of after [an arrival-of-the-mail response] communication link initiation, or performing image transmitting mute during a communication link, and the image transmitting mute actuation at the time of pictorial communication.

[0008]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, in invention of claim

1, it is considering as the configuration which has a self-portrait display means to display the input image from self-equipment, and the control means which starts said self-portrait display means in the call-in condition of pictorial communication, and performs a self-portrait display in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[0009] Moreover, similarly by invention of claim 2, it is considering as the configuration which has a self-portrait display means display the input image from self-equipment, an image transmitting mute actuation means, and the control means that starts said self-portrait display means and performs a self-portrait display when image transmitting mute is required with said image transmitting mute actuation means during the call in of pictorial communication in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[0010] Moreover, when a control means carries out an arrival-of-the-mail response in the same pictorial communication terminal of invention of claim 1 above-mentioned in invention of claim 3, or claim 2, it is considering as the configuration which has a means to stop a self-portrait display means.

[0011] Moreover, it is considering as the configuration which has a means to make the image [which generates the image message which tells a partner terminal about being in an image transmitting mute condition in the same pictorial communication terminal of invention of claim 2 above-mentioned in invention of claim 4, or claim 3 / which carries out image message generating *****] message which a control means generates with said image message generating means in an image transmitting mute condition transmit to a partner terminal.

[0012] Furthermore, similarly, by invention of claim 5, in the image communication terminal of one from claim 1 to claim 4 of invention, when image transmitting mute is performed by the control means, it is considering as the configuration which has a means in the procedure of the CCITT advice H.242 to send out capacity and a command so that it may consider as 1B communication link or video-off as the communicate mode.

[0013]

[Function] At the pictorial communication terminal of this invention, the operability of an image response refusal function and serviceability are improved by displaying a self-portrait in the condition at the time of a call in, or displaying a self-portrait, when an image response refusal function is started during a call in. Moreover, by transmitting an image message into image transmitting mute at the other party, as it turns out that it is reception in the image transmitting mute condition at the other party, serviceability is improved. Furthermore, when requiring image transmitting mute, by considering as 1B communication link of CCITT advice of the communicate mode, or video-off, it avoids performing useless accounting such in the state of transmitting unnecessary image data, or power consumption by video-off is mitigated, and the serviceability at the time of transmitting image response refusal and image transmitting mute actuation and economical efficiency are raised.

[0014]

[Example] Hereafter, the example of this invention is explained to a detail with reference to a drawing.

[0015] Drawing 1 is the block diagram showing the configuration of the 1st, 2nd, and 3rd examples of this invention. The line control circuit which 1 is connected to the circuit trailer DSU of INS net 64, and processes the circuit interface section with the digital network of INS net 64 in drawing, H.221 multiplexing / separation circuit where 2 was based on CCITT advice, the H.261 image codec which performs compression/expanding of the picture signal with which 3 was based on CCITT advice, The power circuit to which 4 supplies a voice codec to each part, and 5 supplies a power source, the telephone control circuit which controls man-machine ** of telephone which has the arrival-of-the-mail mode discernment function in which 6 identifies TV telephone arrival or voice telephone arrival, The voice analog circuit where 7 has the generating circuit of audio analog amplifier, an analog filter, and various tone melodies etc., The image analog circuit where 8 has the analog amplifier of an image, an analog filter, etc., The loudspeaker in which 9 has the function in which the telephone transmitter of a hand set and 10 report the earphone of a hand set, and 11 reports arrival-of-the-mail mode, The built-in LCD which displays a partner image or a self-portrait while 12 has a built-in camera and the image

transmitting mute display function as which 13 displays whether it is an image transmitting mute condition LED which indicates by flashing that 14 is in an image transmitting mute condition, and 15 A sounder, The hook switch whose 16 is the actuation key switch volume of telephone and whose 17 is an arrival-of-the-mail response means, The loudspeaker key whose 18 is an arrival-of-the-mail response means, the image mute key to which 19 has the image transmitting mute actuation function to require the transmitting mute of an image, and 20 are the mirror image / normal image conversion circuit of an image which has the self-portrait display function which displays the input image from self-equipment. [0016] The block which attached the sands pattern shows a conventionally different component from the configuration among drawing. Moreover, the difference in the 1st, 2nd, and 3rd examples is the point that actuation of each part by control of the telephone control circuit of 6 differs.

[0017] First, the 1st example of this invention is explained using drawing 2 . This drawing 2 is a flow chart which shows actuation of the 1st example of this invention.

[0018] If (STEP1) has arrival of the mail from a network, the line control circuit of 1 will be started. Identify arrival from TV telephone or a voice telephone through the line control circuit of 1 in the telephone control circuit of 6 (STEP2), and when an incoming call (call in) is a voice telephone While starting the voice analog circuit of 7 and making a ringer output from the sounder of 14, the image analog circuit of 8 is started and an arrival-of-the-mail condition and the communicate mode are displayed on the built-in LCD of 13 (STEP3). Here, if the arrival-of-the-mail response (STEP4) of the hook switch of 17 is carried out more by the bottom of starting or the loudspeaker key press of 18 off-hook, a circuit will be connected by the line control circuit of 1 and voice telephone communication will be started (STEP5). In voice telephone communication, the sound signal of the other party can be heard from the earphone of 10 through the line control circuit of 1, multiplexing/separation circuit of 2, the voice codec of 4, and the voice analog circuit 7 one by one. On the other hand, the sound signal by the side of self-equipment is inputted from a telephone transmitter 9, and is transmitted to the other party through the voice analog circuit of 7, the voice codec of 4, multiplexing/separation circuit of 2, and the line control circuit of 1.

[0019] when an incoming call is TV telephone, the voice analog circuit of 7 is started and a melody is outputted from the loudspeaker of 11 -- making -- arrival of the mail -- displaying (STEP6) -- pass the image analog circuit of 8 in the self-portrait inputted from the built-in camera of 12 -- it changes into a mirror image by the mirror image / normal image conversion circuit of 19, it turns up to the image analog circuit of 8, and displays on the built-in LCD of 13 (STEP7).

→ [0020] Here, if actuation of an image response refusal setup is performed by the depression of the image mute key of 19 (STEP8), it will indicate by LED of 14 that it is in an image response refusal setup and an image transmitting mute condition by flashing (STEP9), the image analog circuit of 8 will be started, and the image input signal inputted into the image codec of 3 will be cut. Here, if arrival-of-the-mail response actuation is performed by the hook switch of 17, or the loudspeaker key of 18 (STEP10), a circuit will be connected by the line control circuit of 1 and TV pictorial communication (STEP11) without image transmission will be performed, without inputting a picture signal into the image codec of 3. If reset actuation (STEP12) of image transmitting mute is performed by the depression of the image mute key of 19, here Cancel the image transmitting mute display by LED of 14 (STEP13), and the image analog circuit of 8 is started. An image input signal with the internal-organs camera of 12 inputted into the image codec of 3 is connected, an image sending signal is inputted into the line control circuit of 1 through multiplexing/separation circuit of 2, and TV pictorial communication with image transmitting (STEP15) is performed. In addition, the picture signal of the other party is displayed on the internal organs LCD of 13 through the line control circuit of 1, multiplexing/separation circuit of 2, the image codec of 3, and the image analog circuit of 8 one by one.

↗ [0021] If arrival-of-the-mail response actuation (STEP14) is performed by the hook switch of 17, or the loudspeaker key of 18, without actuation of an image response refusal setup being performed by the image mute key of 19 during arrival of the mail Start the image analog circuit of 8 and an image input signal with the internal-organs camera of 12 inputted into the image codec of 3 is connected. An image sending signal is inputted into the line control circuit of 1 through multiplexing/separation circuit of 2, a

circuit is connected by the line control circuit of 1, and TV pictorial communication with image transmitting (STEP15) is performed. If image transmitting mute setting actuation (STEP16) is performed by the image mute key of 19 here, it will indicate by LED of 14 that it is in an image transmitting mute condition by flashing (STEP17), the image analog circuit of 8 will be started, the image input signal inputted into the image codec of 3 will be cut, and TV pictorial communication (STEP11) without image transmission will be performed in the condition that a picture signal is not inputted.

[0022] Thus, since it constitutes from this example so that the self-portrait may be indicated by the mirror image at the time of TV telephone arrival, after checking a self-portrait, there is an advantage that it can choose whether image response refusal is carried out.

[0023] Next, the 2nd example of this invention is explained using drawing 3. This drawing 3 is a flow chart which shows actuation of the 2nd example which carries out the example of an equipment configuration of the 1st example of this invention shown by drawing 1 in common.

[0024] In drawing 3 (STEP1) (STEP2) Actuation (STEP17) (STEP3) (STEP4) (STEP5) (STEP6) (STEP8) (STEP9) [(STEP10)] [(STEP11)] [(STEP12)] [(STEP13)] [(STEP14)] [(STEP15)] [(STEP16)] Drawing 2 (STEP1) (STEP2) It is [(STEP10) / (STEP11) / (STEP12) / (STEP13) / (STEP14) / (STEP15) / (STEP16)] the same (STEP17). (STEP3) (STEP4) (STEP5) (STEP6) (STEP8) (STEP9)

[0025] The point that this example differs from the 1st example loses (STEP7), and it judges whether the image response reject request was carried out after the arrival-of-the-mail display (STEP6) (STEP8). Here If actuation of an image response refusal setup is performed by the image mute key of 19, an image response refusal display (STEP9) will be performed, and the image inputted from the built-in camera of 12 will be passed through the image analog circuit of 8. By the mirror image / normal image conversion circuit of 20 It is the point of changing into a mirror image, turning up to the image analog circuit of 8, displaying on the built-in LCD of 13 (STEP 9-2), and moving to an arrival-of-the-mail response (STEP10).

[0026] Thus, since it constitutes from this example so that the self-portrait may be indicated by the mirror image in case an image response refusal setup is carried out, before answering arrival of the mail, the advantage that the image transmitted beforehand can be checked is.

[0027] Next, the 3rd example of this invention is explained using drawing 4. This drawing 4 is a flow chart which shows actuation of the 3rd example which carries out the example of an equipment configuration of the 1st example of this invention in common.

[0028] In drawing 4 (STEP1) (STEP2) (STEP3) (STEP4) Actuation (STEP18) (STEP5) (STEP6) (STEP8) (STEP9) (STEP 9-2) (STEP10) [(STEP11)] [(STEP12)] [(STEP13)] [(STEP14)] [(STEP15)] [(STEP16)] [(STEP17)] Drawing 3 (STEP1) (STEP2) (STEP3) (STEP4) (STEP5) It is [(STEP10) / (STEP11) / (STEP12) / (STEP13) / (STEP14) / (STEP15) / (STEP16)] the same (STEP17), (STEP6) (STEP7) (STEP8) (STEP9) (STEP 9-2)

[0029] When the point that this example differs from the 2nd example carries out an arrival-of-the-mail response (STEP10) in the state of a self-portrait display, it is a point of suspending the display of a self-portrait (STEP 10-2), displaying the received partner image, and moving to TV telephone communication (STEP11) without image transmission.

[0030] Thus, since it is constituted so that it may change from a self-portrait display to the display of a partner image automatically by arrival-of-the-mail response, this example can check a partner image immediately to communication link initiation and coincidence, and since it can judge whether image response refusal is canceled, it has the advantage which is very excellent in serviceability.

[0031] Next, the 4th example of this invention is explained. Drawing 5 is drawing showing the example of an equipment configuration of the 4th example of this invention, and 21 is an image message generating circuit which has the function which generates the image message which tells a partner terminal about being in an image transmitting mute condition. In this example, the point which has added the image message generating circuit of 21 which attached the sands pattern to the image analog circuit of 8 is a different point from the example of a configuration of drawing 1.

[0032] Drawing 6 is a flow chart which shows actuation of the 4th example of this invention, and explains actuation of the 4th example of this invention below using this flow chart.

[0033] In drawing 6 (STEP1) (STEP2) (STEP3) (STEP4) Actuation (STEP17) (STEP5) (STEP6) (STEP8) (STEP9) (STEP 9-2) [(STEP10)] [(STEP 10-2)] [(STEP12)] [(STEP13)] [(STEP14)] [(STEP15)] [(STEP16)] Drawing 4 R> 4 (STEP1) (STEP2) (STEP3) (STEP4) It is [(STEP10) / (STEP 10-2) / (STEP12) / (STEP13) / (STEP14) / (STEP15) / (STEP16)] the same (STEP17). (STEP5) (STEP6) (STEP8) (STEP9) (STEP 9-2)

[0034] In this example, after suspending a self-portrait display (STEP 10-2), it replaces with TV pictorial communication (STEP11) without image transmission of drawing 4, the image input signal inputted into the image codec of 3 is changed to the blue back image generated in the image message generating circuit of 21, and TV telephone communication (STEP11') of image message (present transmitting mute) transmission is carried out. Drawing 7 is drawing having shown the example of an image message transmitted to a partner terminal in the above.

[0035] Thus, since it consists of this examples in the image transmitting mute condition so that a blue back image etc. may be sent to a partner terminal, in the other party, there is an advantage that it turns out easily that it is received not in the state of failure but in the state of image transmitting mute.

Moreover, the advantage of being easy to judge it carving it being a failure part being the image codec section is on maintenance.

[0036] Next, the 5th example of this invention is explained. Drawing 8 is the block diagram showing the example of an equipment configuration of the 5th example of this invention. Although the fundamental configuration of this example is the same as that of the example of an equipment configuration of drawing 1, H.221 multiplexing / separation circuit of 2 which attached the sands pattern in this example has the control function which sends out capacity and a command so that it may consider as 1B communication link of the CCITT advice H.242, or video-off as the communicate mode.

[0037] Drawing 9 is a flow chart which shows actuation of the 5th example, and explains actuation of the 5th example below using this flow chart.

[0038] In this drawing (STEP1) (STEP2) (STEP3) (STEP4) (STEP5) Actuation (STEP17) (STEP6) (STEP8) (STEP9) (STEP 9-2) (STEP10) [(STEP 10-2)] [(STEP11)] [(STEP12)] [(STEP13)] [(STEP14)] [(STEP15)] [(STEP16)] Drawing 4 (STEP1) (STEP2) (STEP3) (STEP4) (STEP5) It is [(STEP 10-2) / (STEP11) / (STEP12) / (STEP13) / (STEP14) / (STEP15) / (STEP16)] the same (STEP17). (STEP6) (STEP8) (STEP9) (STEP 9-2) (STEP10)

[0039] this example -- under arrival of the mail -- an image response refusal setup -- carrying out -- under an arrival-of-the-mail response (STEP10) or pictorial communication -- an image mute setup -- carrying out (STEP17) (STEP16) -- the telephone control circuit of 6 -- H.221 multiplexing / separation circuit of 2 -- controlling -- capacity -- 1B and a command -- video -- it sets up off (STEP 10-3), and the communicate mode is made into 1B and a video OFF state. moreover, 1B and a video OFF state -- a transmitting mute setup -- canceling (STEP13 (STEP12)) -- H.221 multiplexing / separation circuit of 2 is controlled, capacity is made into 2B, it sets a command as video-on (STEP 14-2), and the telephone control circuit of 6 makes the communicate mode 2B and a video ON state. These points are different points from actuation of the 3rd example of drawing 4 .

[0040] Thus, since it consists of this examples so that it may change into 1B communication link automatically when image response refusal and image transmitting mute are performed in 2B communication link, it can avoid that transmit unnecessary image data with 2B communication link, and useless accounting is performed, and there is an advantage which can save a telex rate. Moreover, there is an advantage that mitigation of power consumption can be aimed at, by turning off the power source of the image codec 3 by considering as a video OFF state.

[0041] In addition, although the above-mentioned example explained that an image response refusal setup was carried out in front of communication link initiation by manual operation at the time of arrival of the mail, or image transmitting mute setup / discharge can be performed during a communication link. Further, even if this invention does not carry out image response refusal actuation, it carries out an image response refusal setup automatically, or It is also possible to identify ** ID of a setup/discharge

of the image transmitting mute by the PB signal from remoteness, and an incoming call, and to set image response refusal automatically, and there is an advantage which can improve the serviceability of the image response refusal function at the time of arrival of the mail and operability further. Moreover, this invention can be carried out combining each example shown above to arbitration. thus, this invention is applied to versatility in accordance with the main point, and can take various embodiments.

[0042]

[Effect of the Invention] As explained above, the pictorial communication terminal of this invention has the advantage which can improve the serviceability in pictorial communication, and operability remarkably.

[0043] It has the advantage which the serviceability of an image response refusal function can improve remarkably in order to indicate by the self-portrait in the state of a call in, or to display a self-portrait, when especially invention of claims 1 or 2 starts an image response refusal function during a call in.

[0044] Moreover, since especially invention of claim 3 stops a self-portrait display after an arrival-of-the-mail response after displaying a self-portrait above, there is [an advantage excellent in operability].

[0045] Moreover, it becomes intelligible to have received in the state of image transmitting mute for the other party, and invention of claim 4 has the advantage in which serviceability is remarkably excellent in order for especially the inside of image transmitting mute to transmit against a message image.

[0046] Furthermore, in order not to perform useless accounting in the state of 2B communication link too much [in order to transmit unnecessary image data especially], or since invention of claim 5 has mitigated power consumption by video-off, it has the advantage which can improve remarkably the serviceability at the time of transmitting image response refusal and image transmitting mute actuation, and economical efficiency.

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TECHNICAL FIELD

[Industrial Application] This invention relates to the suitable pictorial communication terminal for TV telephone which can perform voice communication and pictorial communication to coincidence, and TV meeting equipment.

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PRIOR ART

[Description of the Prior Art] In the private pictorial communication which used TV telephone etc., the image response refusal function which can carry out communication link initiation in the state of image transmitting mute, without sending a self-portrait at the time of after [an arrival-of-the-mail response] communication link initiation is considered to be effective service.

[0003] By the way, it was impossible to have checked beforehand the self-portrait transmitted by conventional TV telephone before answering the arrival of pictorial communication. Moreover, it was performing considering as an image transmitting mute condition conventionally in turning off an image input. Moreover, even when having set the circuit channel used during a communication link as communicate mode 2B of CCITT advice and image transmitting mute actuation was carried out, the connection condition of 2B might be maintained.

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EFFECT OF THE INVENTION

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[0043] It has the advantage which the serviceability of an image response refusal function can improve remarkably in order to indicate by the self-portrait in the state of a call in, or to display a self-portrait, when especially invention of claims 1 or 2 starts an image response refusal function during a call in.

[0044] Moreover, since especially invention of claim 3 stops a self-portrait display after an arrival-of-the-mail response after displaying a self-portrait above, there is [an advantage excellent in operability].

[0045] Moreover, it becomes intelligible to have received in the state of image transmitting mute for the other party, and invention of claim 4 has the advantage in which serviceability is remarkably excellent in order for especially the inside of image transmitting mute to transmit against a message image.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Thus, by conventional TV telephone, since it was impossible to check beforehand the self-portrait transmitted before answering the arrival of pictorial communication, there was a trouble that serviceability was bad.

[0005] Moreover, since it was performing considering as an image transmitting mute condition conventionally in turning off an image input, the black screen was only sent to the partner terminal, in the other party, it became things from the part whether it is out of order in whether it has received in the state of image transmitting mute, and there was a trouble that serviceability was missing.

[0006] Moreover, when useless accounting would be performed and it was actually used where 2B eye is connected too much in order to maintain the connection condition of 2B and to transmit unnecessary image data, even when having set the circuit channel used during a communication link as the communicate mode of 2B and image transmitting mute actuation is carried out, the problem was in serviceability and economical efficiency.

[0007] It is made in order that this invention may solve the above-mentioned trouble, and the purpose is for providing about a pictorial communication terminal suitable as TV telephone which has improved remarkably the serviceability at the time of actuation, economical efficiency, and operability, and a TV meeting terminal at the time of the arrival in the case of performing image response refusal at the time of after [an arrival-of-the-mail response] communication link initiation, or performing image transmitting mute during a communication link, and the image transmitting mute actuation at the time of pictorial communication.

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MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, in invention of claim 1, it is considering as the configuration which has a self-portrait display means to display the input image from self-equipment, and the control means which starts said self-portrait display means in the call-in condition of pictorial communication, and performs a self-portrait display in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[0009] Moreover, similarly by invention of claim 2, it is considering as the configuration which has a self-portrait display means display the input image from self-equipment, an image transmitting mute actuation means, and the control means that starts said self-portrait display means and performs a self-portrait display when image transmitting mute is required with said image transmitting mute actuation means during the call in of pictorial communication in the pictorial communication terminal which can perform voice communication and pictorial communication to coincidence.

[0010] Moreover, when a control means carries out an arrival-of-the-mail response in the same pictorial communication terminal of invention of claim 1 above-mentioned in invention of claim 3, or claim 2, it is considering as the configuration which has a means to stop a self-portrait display means.

[0011] Moreover, it is considering as the configuration which has a means to make the image [which generates the image message which tells a partner terminal about being in an image transmitting mute condition in the same pictorial communication terminal of invention of claim 2 above-mentioned in invention of claim 4, or claim 3 / which carries out image message generating *****] message which a control means generates with said image message generating means in an image transmitting mute condition transmit to a partner terminal.

[0012] Furthermore, similarly, by invention of claim 5, in the image communication terminal of one from claim 1 to claim 4 of invention, when image transmitting mute is performed by the control means, it is considering as the configuration which has a means in the procedure of the CCITT advice H.242 to send out capacity and a command so that it may consider as 1B communication link or video-off as the communicate mode.

[Translation done.]

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OPERATION

[Function] At the pictorial communication terminal of this invention, the operability of an image response refusal function and serviceability are improved by displaying a self-portrait in the condition at the time of a call in, or displaying a self-portrait, when an image response refusal function is started during a call in. Moreover, by transmitting an image message into image transmitting mute at the other party, as it turns out that it is reception in the image transmitting mute condition at the other party, serviceability is improved. Furthermore, when requiring image transmitting mute, by considering as 1B communication link of CCITT advice of the communicate mode, or video-off, it avoids performing useless accounting such in the state of transmitting unnecessary image data, or power consumption by video-off is mitigated, and the serviceability at the time of transmitting image response refusal and image transmitting mute actuation and economical efficiency are raised.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the example of an equipment configuration of the 1st, 2nd, and 3rd examples of this invention

[Drawing 2] The flow chart which shows actuation of the 1st example of the above

[Drawing 3] The flow chart which shows actuation of the 2nd example of the above

[Drawing 4] The flow chart which shows actuation of the 3rd example of the above

[Drawing 5] The block diagram showing the example of an equipment configuration of the 4th example of this invention

[Drawing 6] The flow chart which shows actuation of the 4th example of the above

[Drawing 7] Drawing showing an example of the image message in the 4th example of the above

[Drawing 8] The block diagram showing the example of an equipment configuration of the 5th example of this invention

[Drawing 9] The flow chart which shows actuation of the 5th example of the above

[Description of Notations]

- 1 -- Line control circuit
- 2 -- H.221 multiplexing / separation circuit
- 3 -- H.261 image codec
- 4 -- Voice codec
- 5 -- Power circuit
- 6 -- Telephone control circuit
- 7 -- Voice analog circuit
- 8 -- Image analog circuit
- 9 -- Telephone transmitter
- 10 -- Earphone
- 11 -- Loudspeaker
- 12 -- Built-in camera
- 13 -- Built-in LCD
- 14 -- LED
- 15 -- Sounder
- 16 -- Actuation key switch volume
- 17 -- Hook switch
- 18 -- Loudspeaker key
- 19 -- Image mute key
- 20 -- A mirror image / normal image conversion circuit
- 21 -- Image message generating circuit

[Translation done.]

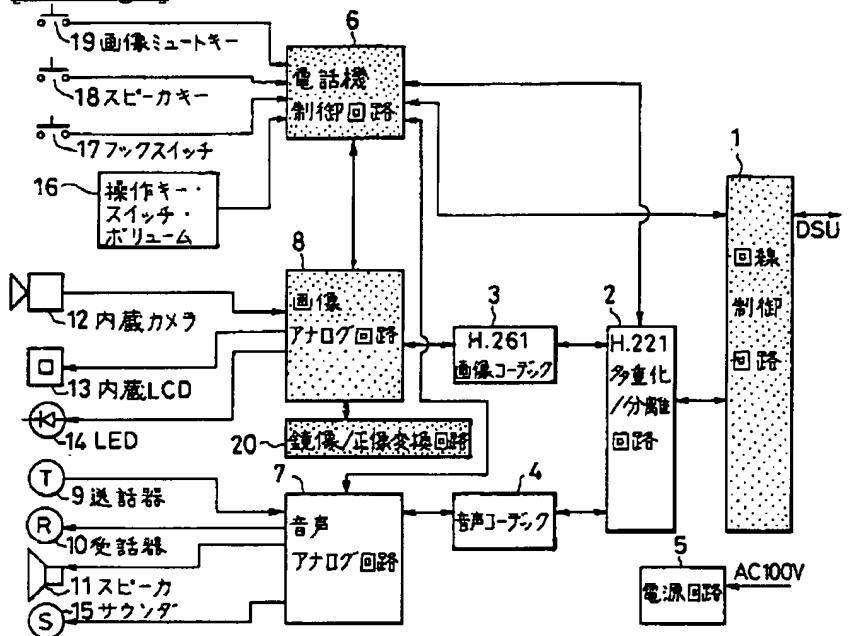
* NOTICES *

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DRAWINGS

[Drawing 1]

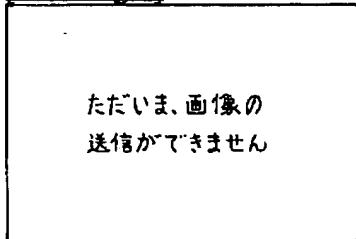


19: Image mute key ✓

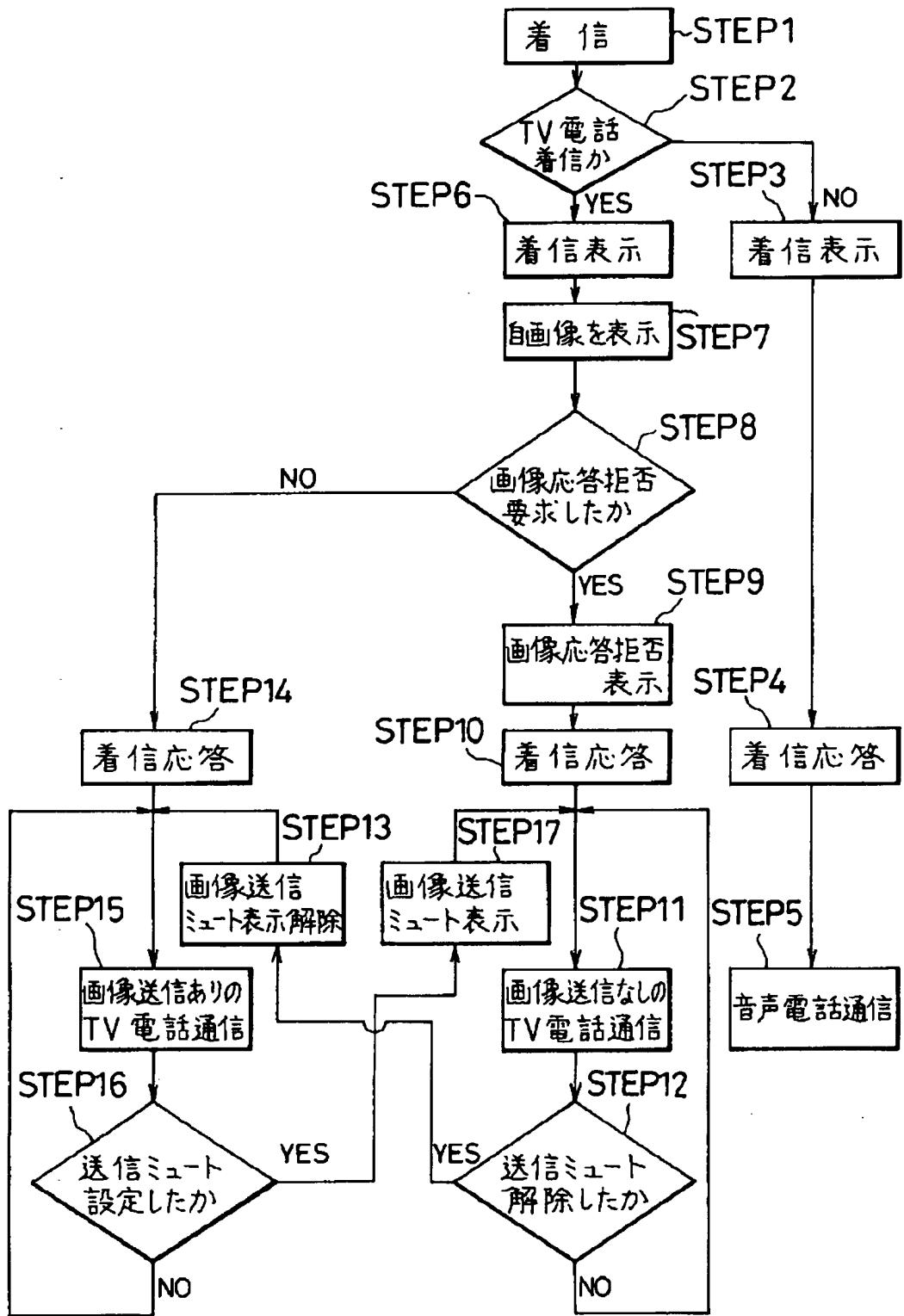
3: Image Codec

2: multiplexer ✓

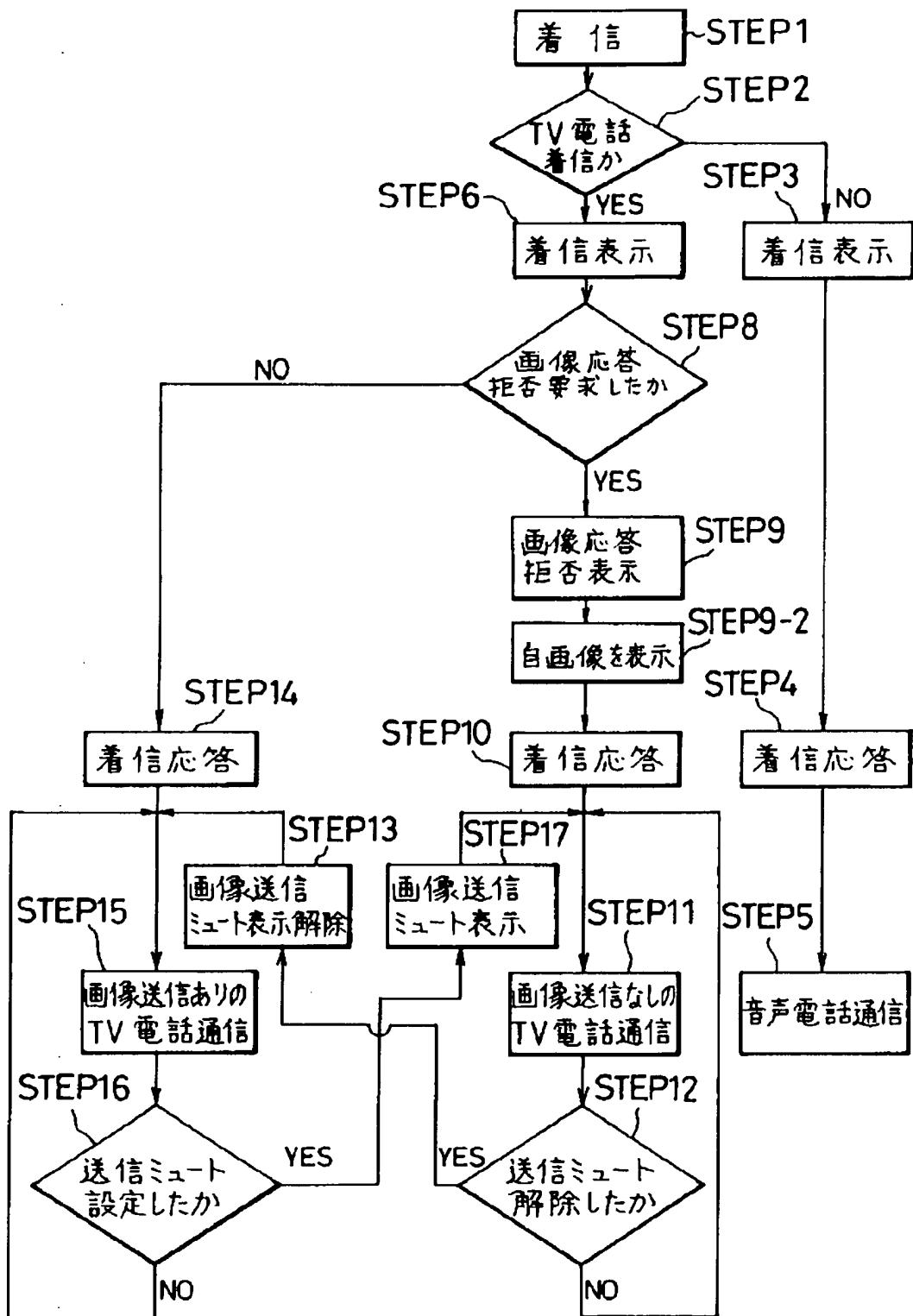
[Drawing 7]



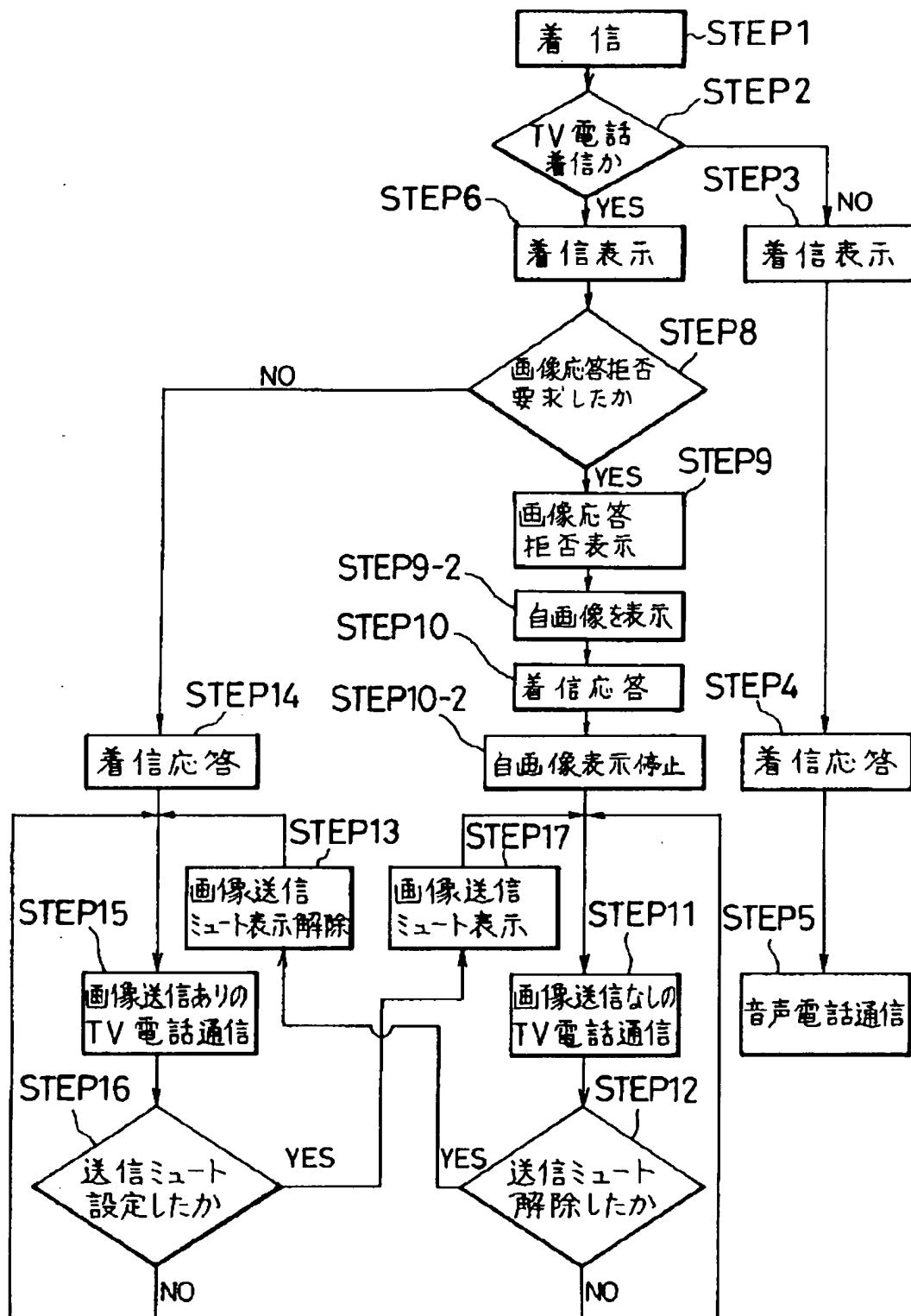
[Drawing 2]



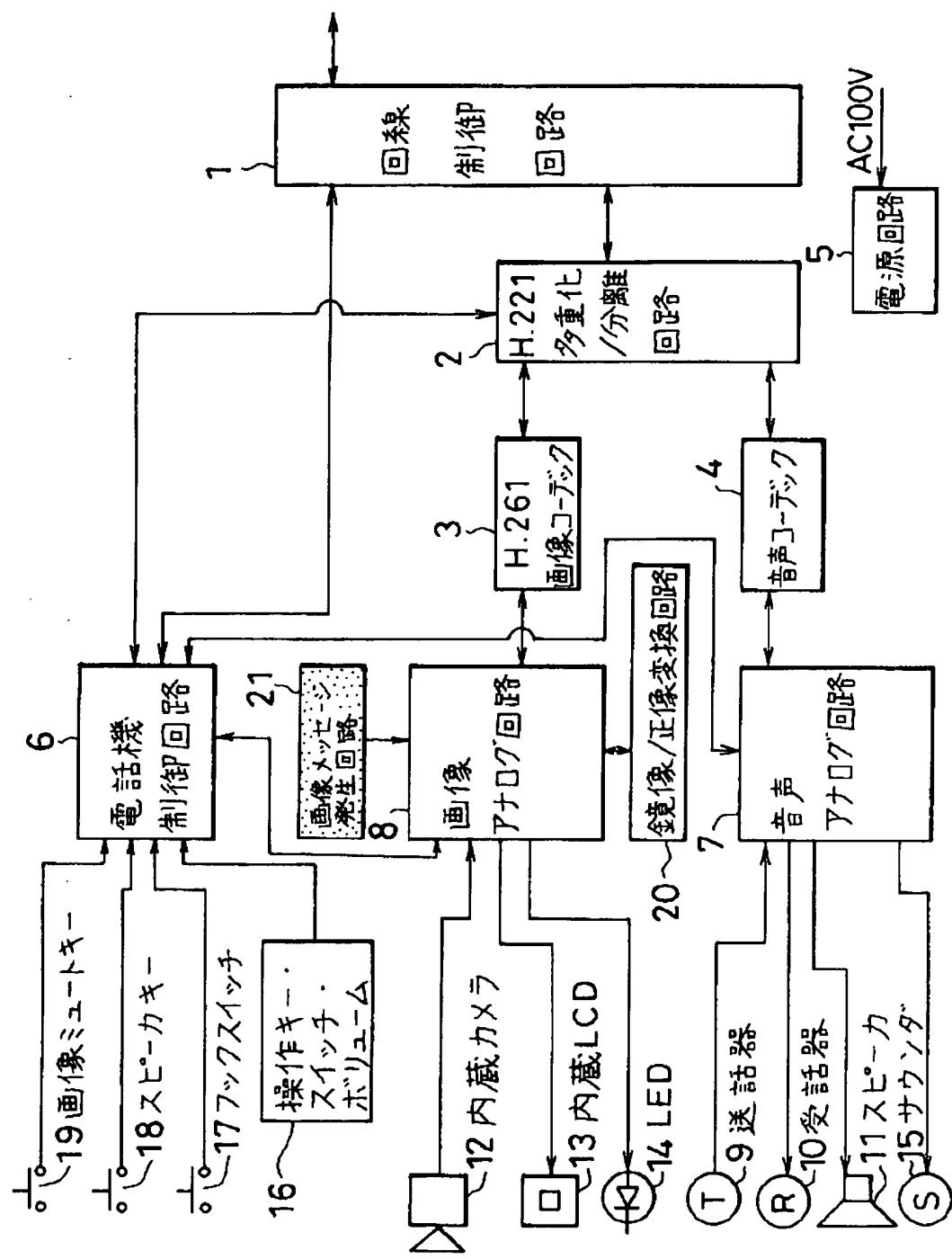
[Drawing 3]



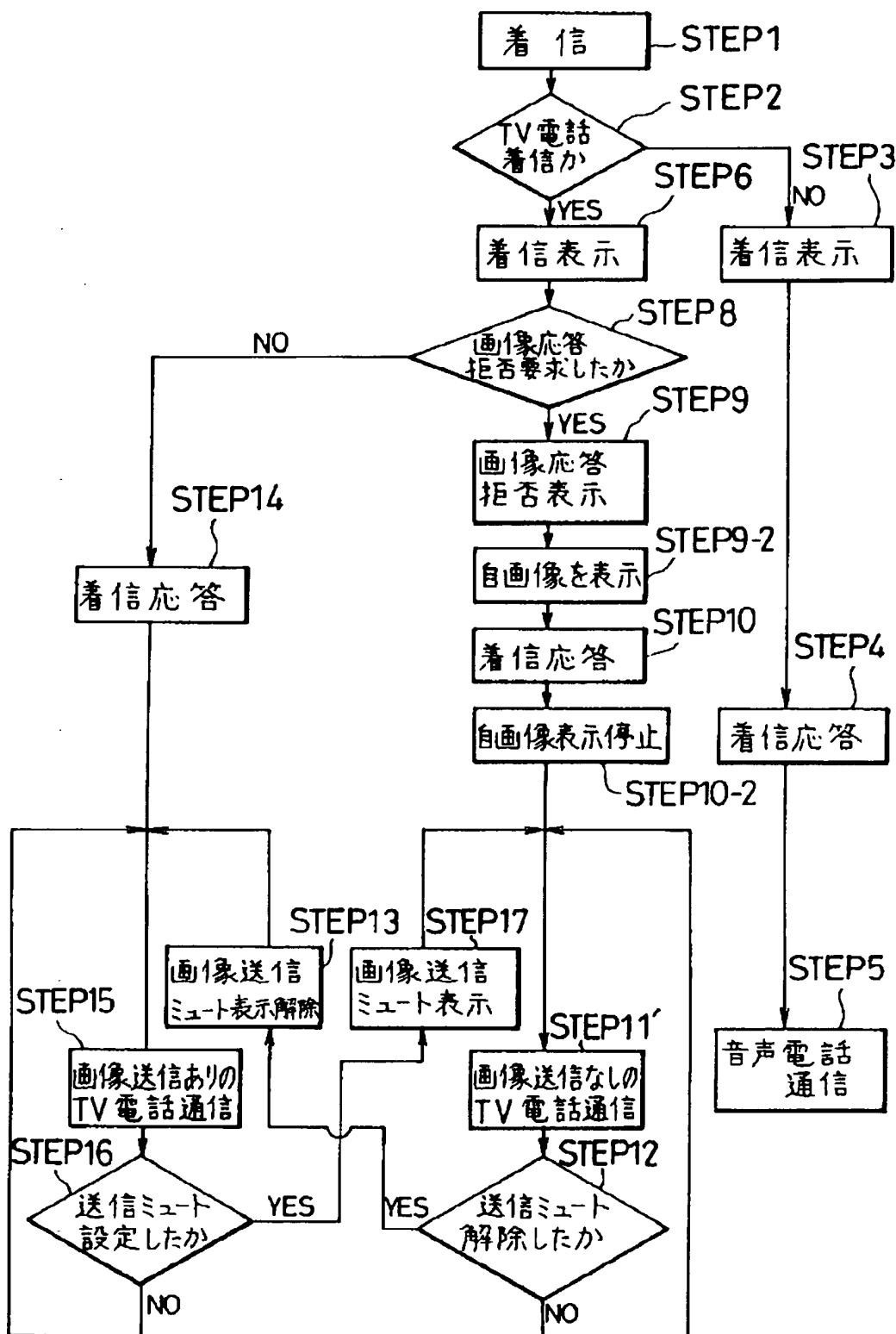
[Drawing 4]



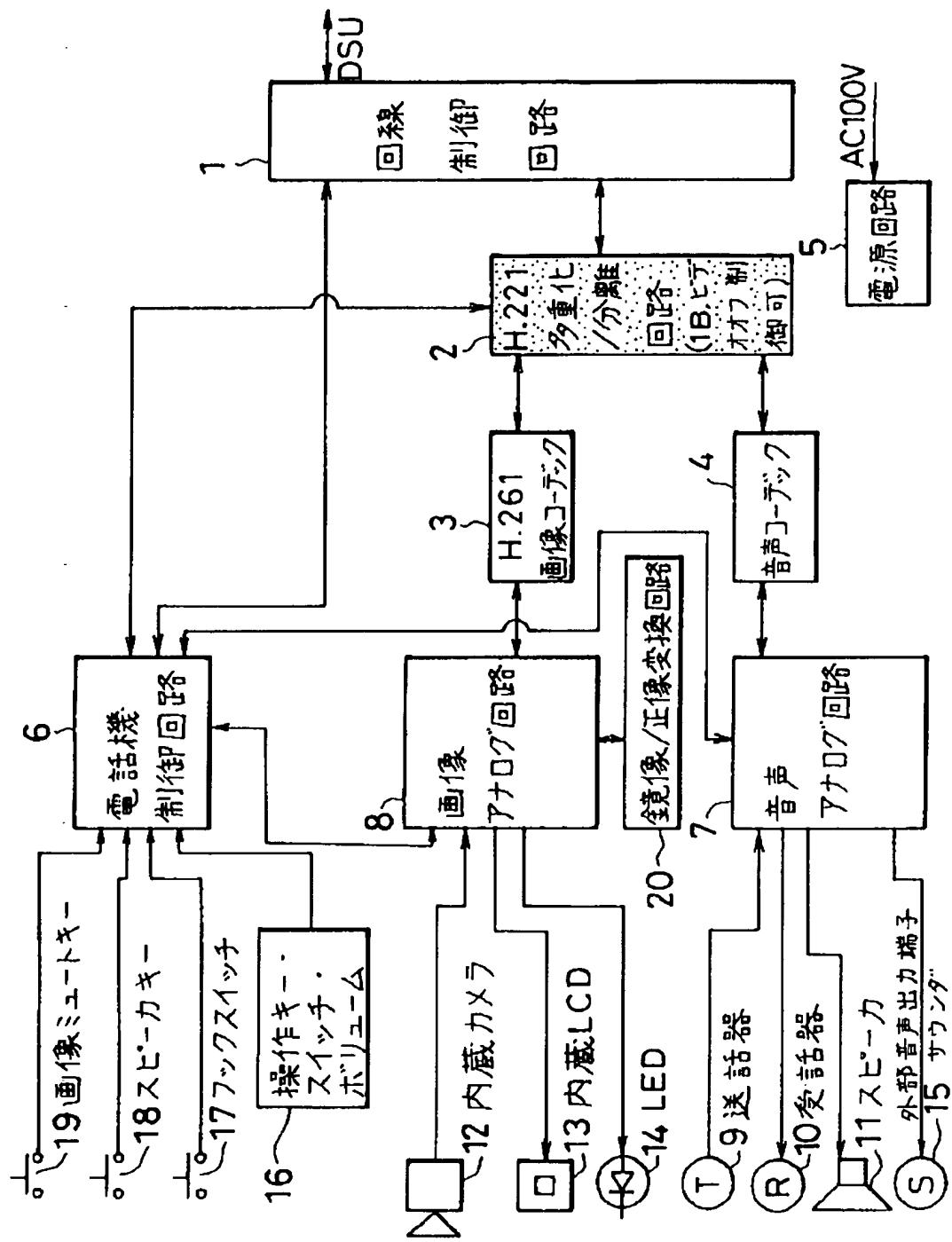
[Drawing 5]



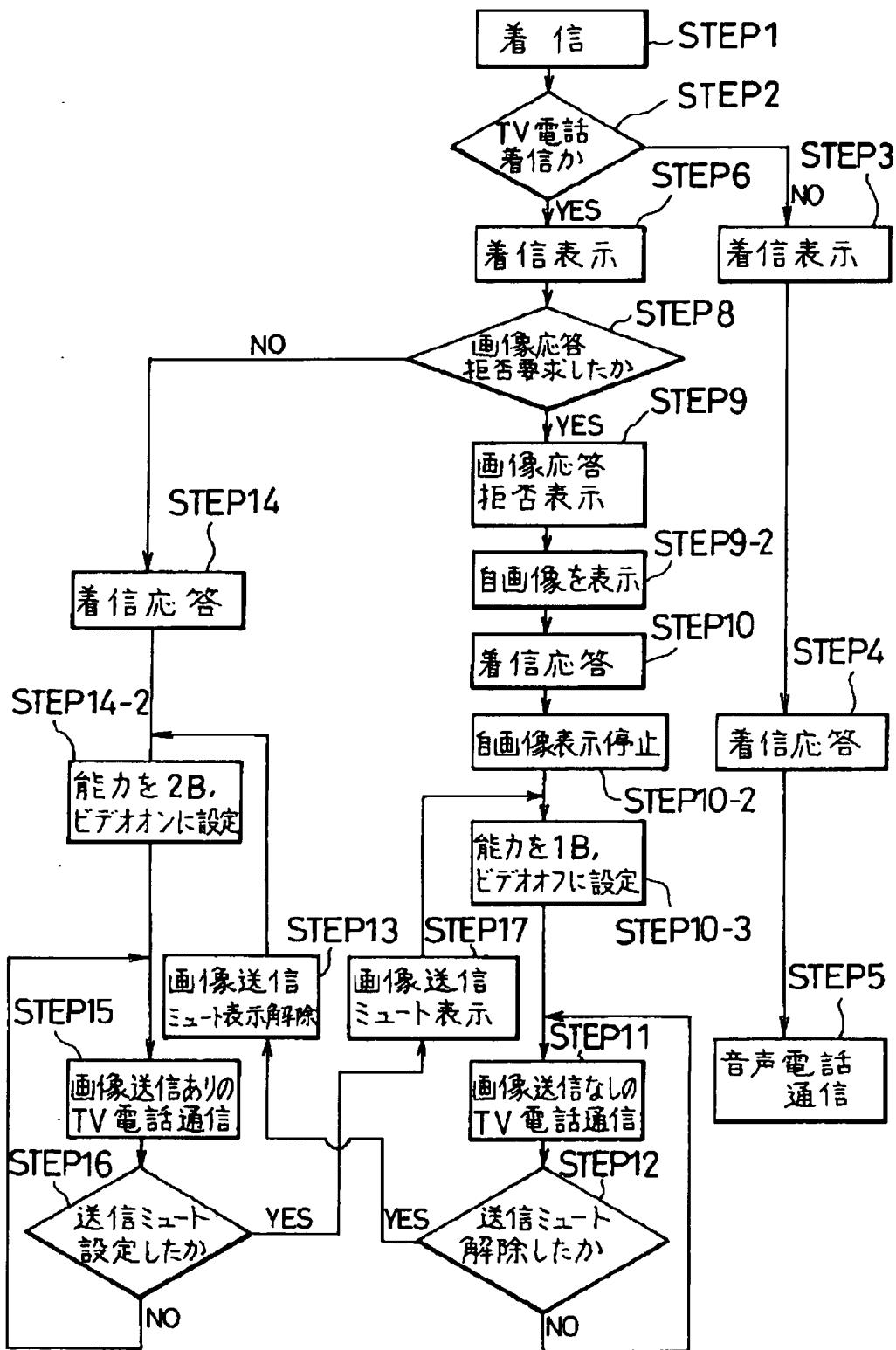
[Drawing 6]



[Drawing 8]



[Drawing 9]



[Translation done.]